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(54) Title: METHODS FOR VIRAL PARTICLE CHARACTERIZATION USING TWO-DIMENSIONAL LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY

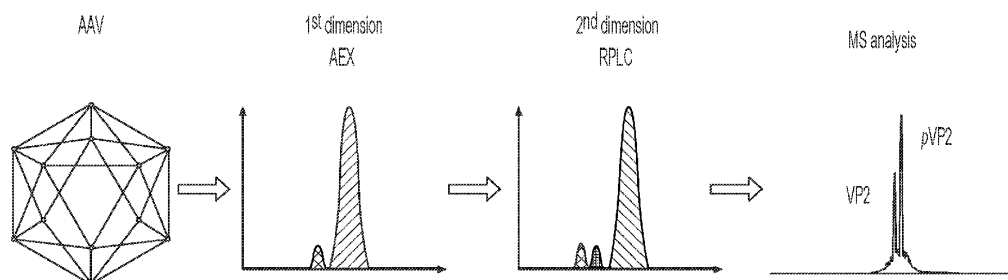


FIG. 2A

(57) Abstract: Methods for identifying viral protein constituents and quantifying the relative abundance of such viral protein constituents in a sample of viral particles are disclosed. In embodiments, the methods include first-dimension chromatography to separate intact viral capsid components of the sample, online denaturation of the viral capsid components to produce intact viral proteins, second-dimension chromatography to separate the viral proteins, and mass spectrometry to determine the masses of the viral proteins and identify the viral protein constituents of the sample.

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